CLAIMS

What is claimed is:

1.   A method of developing a telecommunications service program using
5   a plurality of service independent building blocks, the method comprising:

developing at least one service logic subroutine graph using a graphical
interface;

generating a subroutine icon representing each service logic subroutine
graph; and

10   inserting each subroutine icon into a service graph and connecting the icon
to other subroutine icons and/or service independent building blocks in the service
graph to form a service graph having an overall service logic process.

2.   The method of claim 1 wherein a subroutine graph comprises:
15   a begin subroutine service independent building block indicating the start of
the subroutine graph;

at least one service independent building block connected to the begin
subroutine graph; and

at least one return subroutine service independent building block, a return
20   subroutine service independent building block indicating an end of a corresponding
service logic sub process in the subroutine graph and being connected to at least
one service independent building block.

3.   The method of claim 2 wherein developing at least one service logic
25   subroutine graph using a graphical interface comprises:

opening a new service graph canvas;

placing service independent building blocks onto the canvas and
interconnecting the blocks;

placing the begin subroutine service independent building block on the
30   canvas and interconnecting it to at least one service independent building block;
and

placing the return subroutine service independent building block on the canvas and interconnecting it to at least one service independent building block.

4.   The method of claim 1 wherein a subroutine graph comprises:

5   input parameters that can be set by a service graph calling the subroutine graph;

output parameters that can be returned to the service graph calling the subroutine graph; and

event parameters that can be returned to the service graph calling the

10   subroutine graph.

5.   The method of claim 1 wherein developing at least one service logic subroutine graph using a graphical interface comprises:

selecting a new subroutine tab;

15   opening a subroutine canvas responsive to the selection of the new subroutine tab; and

placing service independent building blocks onto the canvas and interconnecting the blocks as required to execute a service logic sub process.

20   6.   The method of claim 5 wherein placing service independent building blocks onto the canvas comprises copying a group of service independent building blocks from the service graph and pasting them on the subroutine canvas.

7.   A method of developing a telecommunications service program using

25   a plurality of service independent building blocks, the method comprising:

developing at least one service logic subroutine graph using a graphical interface; and

inserting each subroutine graph into a service graph and connecting the subroutine graph to other subroutine graphs and/or service independent building

30   blocks in the service graph to form a service graph having an overall service logic process.

8.   The method of claim 7 wherein inserting each subroutine graph into a service graph and connecting the subroutine graph comprises:

assigning an icon to each subroutine graph;

5   inserting the icon into the service graph; and

connecting the subroutine icon as required to other subroutines icons and/or service independent building blocks.

9.   The method of claim 7 wherein a subroutine graph comprises:

10   a begin subroutine service independent building block indicating the start of the subroutine graph;

at least one service independent building block connected to the begin subroutine graph; and

at least one return subroutine service independent building block, a return

15   subroutine service independent building block indicating an end of a corresponding service logic sub process in the subroutine graph and being connected to at least one service independent building block.

10.   The method of claim 9 wherein developing at least one service logic

20   subroutine graph using a graphical interface comprises:

opening a new subroutine service graph canvas;

placing service independent building blocks onto the canvas and interconnecting the blocks;

placing the begin subroutine service independent building block on the

25   canvas and interconnecting it to at least one service independent building block; and

placing each return subroutine service independent building block on the canvas and interconnecting it to at least one service independent building block.

30   11.   The method of claim 8 wherein a subroutine graph comprises:

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input parameters that can be set by a service graph calling the subroutine graph;

output parameters that can be returned to the service graph calling the subroutine graph; and

5   event parameters that can be returned to the service graph calling the subroutine graph.

12.   The method of claim 8 wherein developing at least one service logic subroutine graph using a graphical interface comprises:

10   selecting a new subroutine tab;

opening a subroutine canvas responsive to the selection of the new subroutine tab; and

placing service independent building blocks onto the canvas and interconnecting the blocks as required to execute a service logic sub process.

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13.   The method of claim 12 wherein placing service independent building blocks onto the canvas comprises copying a group of service independent building blocks from the service graph and pasting them on the subroutine canvas.

20   14.   A computer-readable medium whose contents cause a computer to develop a telecommunications service program using a plurality of service independent building blocks by performing the operations of:

developing at least one service logic subroutine graph using a graphical interface;

25   generating a subroutine icon representing each service logic subroutine graph; and

inserting each subroutine icon into a service graph and connecting the icon to other subroutine icons and/or service independent building blocks in the service graph to form a service graph having an overall service logic process.

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15.   The computer-readable medium of claim 14 wherein a subroutine graph comprises:

a begin subroutine service independent building block indicating the start of the subroutine graph;

5   at least one service independent building block connected to the begin subroutine graph; and

at least one return subroutine service independent building block, each return subroutine service independent building block indicating an end of a corresponding service logic sub process in the subroutine graph and being 10   connected to at least one service independent building block.

16.   The computer-readable medium of claim 14 wherein developing at least one service logic subroutine graph using a graphical interface comprises:

selecting a new subroutine tab;

15   opening a subroutine canvas responsive to the selection of the new subroutine tab; and

placing service independent building blocks onto the canvas and interconnecting the blocks as required to execute a service logic sub process.

20   17.   A method of executing a telecommunications service, comprising:

receiving a service program for executing the telecommunications service, the service program having been generated by,

developing at least one service logic subroutine graph using a graphical interface;

25   generating a subroutine icon representing each service logic subroutine graph; and

inserting each subroutine icon into a service graph and connecting the icon to other subroutine icons and/or service independent building blocks in the service graph to form a service graph having an overall service logic process; and

30   running the service program to provide the telecommunications service.

18.   The method of claim 17 wherein receiving a service program comprises receiving a service script generated from the service graph.

19.   A method of executing a telecommunications service, comprising:

5   under control of a client system,

developing at least one service logic subroutine graph using a graphical interface;

generating a subroutine icon representing each service logic subroutine graph; and

10   inserting each subroutine icon into a service graph and connecting the icon to other subroutine icons and/or service independent building blocks in the service graph to form a service graph having an overall service logic process;

transferring the service graph to a server system; and

15   under control of the server system, running the service program to provide the telecommunications service.

20.   The method of claim 1 9 wherein transferring the service g raph to a server system comprising generating on the client system a service script from the

20   service graph, and transferring the service script to the server system.

21.   The method of claim 20 further comprising developing an executable application program on the server system, the executable application program being developed under control of the client system. .

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22.   A client computer system, comprising:

a graphical interface component operable in response to user input to develop at least one service logic subroutine graph using a graphical interface and to generate a subroutine icon representing each service logic subroutine graph,

30   and operable to responsive to user input to insert each subroutine icon into a service graph and connect the icon to other subroutine icons and/or service

independent building blocks in the service graph to form a service graph having an overall service logic process.

23. The client computer system of claim 22 further comprising:

an application build component operable to communicate with a server system to generate an application program on the server system;

a deployment component coupled to the graphical interface component to receive a service script from the graphical interface component and operable to process the service script to generate files for deployment on the server system; and

a provisioning component operable to generate service data tables on the server system for use during execution of the service corresponding to the service script.

24. A server computer system, comprising:

a build server adapted to receive a service script corresponding to a telecommunications service, the service script having been generated from a service graph formed from a plurality of interconnected service independent building blocks and subroutine icon, each subroutine icon representing a subroutine graph, and the build server operable to compile the service script to generate a service image;

an open database server operable to generate service data tables required by the service image and store the tables in a table database; and

an application component operable to execute the service image to provide the telecommunications service.

25. The server system of claim 24 wherein the server system comprises a service control point in an SS7 network.

26.   The server system of claim 24 further comprising a service image database component including a plurality of service images that are executed by the application component.